## Nature, culture and economics conspire to plague Asia

HONG KONG: Asia's role as a stop-off point for millions of migrating birds could be behind a recent spate of new and lethal virus outbreaks in the region, health experts said Tuesday.

The foreign viruses and bacteria that thousands of species of birds from as far afield as Europe and the Middle East bring with them en route to warmer climes could have caused diseases such as SARS and avian bird flu.

The theory is one among many that researchers from universities and the World Health Organisation (WHO) are probing in a bid to explain what appears to have been a sudden rise in new diseases throughout Asia.

"There is a lot of research going into this — the WHO is looking into this," said WHO epidemiologist Richard Brown from his office in Manila. "In all honesty there is no definite answer to why Asia appears to have suddenly got more than its fair share of new diseases," he said. "But we can identify factors that could explain it."

While most experts attribute part of the apparent surge to better detection in once cut-off parts of the world, they are mostly baffled over what appears to have been a 12-month curse of exotic flus and other diseases.

Apart from Severe Acute Respiratory Syndrome (SARS), the past year has seen the re-emergence in South Korea and Vietnam of the avian H5N1 flu, a strain that killed six people in Hong Kong in 1997.

Malaysia and China suffered the virulent Fujian flu and Hong Kong was troubled by dengue fever and Japanese encephalitis.

"In China, because of SARS there are now teams dedicated to detecting outbreaks, which makes it seem like there are more viruses," said John Tam, professor of microbiology at Hong Kong's Chinese University. "It could be that these diseases were there anyway and we just didn't know about them."

Brown agrees, saying there is growing evidence that SARS may have been around for many years, affecting only small pockets of people and making no headlines.

Under this scenario, he believes, it became an epidemic only once subject to a process that has speeded up the spread of all diseases worldwide: increased human mobility.

"Humans are moving into places that they had never lived before and as a result are coming into contact with virus and bacteria they had never come in contact with," said Brown. "They then move on and take that virus with them."

The migrating bird theory approaches the same issue from the opposite direction: instead of taking humans to the disease, birds may be bringing the disease to them.

Animals, Tam says, are crucial to the emergence of new diseases. Of those that have caused most concern over the past decade or so, almost all have leapt species from animals after mutating. HIV is widely believed to have originated in primates; the H5N1 avian bird flu found its first host in chickens; and SARS is widely believed to have emerged in civet cats.

There is some credence to

the bird theory. Migrating birds introduced the West Nile Virus to New York in 1999 and from there the disease has since spread to all corners of North America and Mexico.

Such diseases are by no means the result of poor hygiene or poverty and are not confined to Asia or the developing world: mad cow disease, for instance first appeared in Britain, the bird flu has also taken hold in the Netherlands and Australia has seen at least six new viruses emerge, including Ross River Fever.

However, Asians — and people in other hot-spots of emergent diseases such as parts of Africa — have a tradition of keeping a closer association with the animals they eat.

"Chinese people, especially, like to eat fresh meat and that means buying the animals while they are alive," said Tam. "Unfortunately, that also means that the market trader and the customer and lots of other people are in close contact with live animals.

"In other cultures only the farmer has such contact."

The problem is compounded in southern China by a tradition of eating wild animals, the most common origin of emergent viruses.

While the resultant contact of wild animals, domesticated animals and humans makes the region a cross-contamination hotspot, Brown is not convinced this alone is responsible for the rise in new diseases. "Like many things that are blamed — things like poverty, lax hygiene and so on — these are things that have happened for thousands of upper " he says \_\_\_\_AFD